

Mixed Low-Level Waste Disposal at the Nevada Test Site

What Are the Mixed Low-Level Waste Disposal Capabilities at the NTS?

Mixed low-level waste disposal capabilities at the Nevada Test Site (NTS) are being expanded to accept waste generated at other sites within the U.S. Department of Energy (DOE) Complex. The fourth *Record of Decision* for the Waste Management Programmatic Environmental Impact Statement identified the NTS as one of two national mixed low-level waste disposal sites for the DOE Complex. In response, the DOE National Nuclear Security Administration Nevada Operations Office (NNSA/NV) has developed a strategy for expanding the disposal capabilities of the NTS.

Current mixed low-level waste disposal operations are limited to waste generated from NNSA/NV activities *within* the state of Nevada. To expand these operations, a strategic plan was completed in May 2000 that identified regulatory, health and

safety, and design and construction requirements, as well as operational capabilities. Based on this plan, NNSA/NV anticipates the NTS Mixed Waste Disposal Program for offsite generators to be operational in late 2002. The key elements of this Program include development of a *Resource Conservation and Recovery Act* (RCRA) Permitted Facility with a 20,000 cubic meter disposal capacity and establishment of a waste verification program.

On December 22, 2000, the NNSA/NV submitted a RCRA Permit Application to the Nevada Division of Environmental Protection. This Permit Application details information concerning the Area 5 Pit 3 Mixed Waste Disposal Unit facility design and operation to support the acceptance and subsequent disposal of DOE off-site generated mixed low-level waste.



Pit 3 Mixed Waste Disposal Facility

How Does a Generator Get Approval to Ship Waste?

Each generator of mixed low-level waste destined for disposal at the NTS must obtain advanced approval from NNSA/NV, which involves a series of steps that a waste generator must successfully complete. A key step is the development of a waste certification program to comply with the acceptance criteria. Once the program is approved, waste stream profiles



Mixed Waste Disposal Operations in Progress

can be submitted for review and approval on a waste stream-specific basis. The approval process includes a comprehensive review of program documents and generator facility evaluations (i.e., audits, surveillances, and program reviews).

What Are the Acceptable Waste Forms?

Acceptable waste forms are those that meet the U.S. Environmental Protection Agency Land Disposal Restriction treatment standards. Waste forms consist of macro-encapsulated lead solids, vitrified mixed low-level waste, stabilized mixed low-level waste, some types of mixed low-level waste debris, and other waste forms on a case-by-case basis. NNSA/NV is establish-

ing Real-Time Radiography capabilities that will allow non-intrusive visual inspection of the contents of the waste containers. This technology will be used to verify that the waste form indicated on the shipping documents is consistent with the waste form received for disposal.

What Are the Packaging Requirements?

Typical U.S. Department of Transportation packaging to be accepted for disposal includes boxes measuring 4' x 4' x 7' or 4' x 2' x 7', or 55-gallon drums. Alternate packaging will be considered, but waste management personnel need to be consulted prior to disposal to ensure equipment compatibility.



Area 5 Radioactive Waste Management Site



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